

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 95-208  
NPDES NO. CA0037788

REISSUING WASTE DISCHARGE REQUIREMENTS FOR

CITY OF BURLINGAME  
AND  
NORTH BAYSIDE SYSTEM UNIT  
SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region,  
(hereinafter called the Board) finds that:

1. The City of Burlingame, hereinafter called the discharger, submitted a report of waste discharge dated February 6, 1995, for reissuance of waste discharge requirements and NPDES Permit No. CA0037788 for the discharge of wastewater to waters of the State and the United States under the National Pollutant Discharge Elimination System (NPDES).
2. This discharge is presently governed by Waste Discharge Requirements in Order No. 90-100, adopted by the Board on July 18, 1990.
3. The City of Burlingame is a member of the North Bayside System Unit (NBSU), which is the Joint Powers Authority responsible for operation of certain shared transport and disposal facilities. The NBSU includes the Cities of Millbrae, Burlingame, South San Francisco and San Bruno, San Francisco International Airport, and Marine Magnesium Company. The joint effluent is dechlorinated prior to discharge to San Francisco Bay. The discharger's Wastewater Treatment Plant contributes about 16% of NBSU flow.
4. The discharger owns and operates the Burlingame Waste Water Treatment Plant, located at 1103 Airport Boulevard in Burlingame (see Attachment A). The plant provides secondary level treatment for domestic and commercial wastewater from Burlingame, Hillsborough, and unincorporated areas of San Mateo County. The discharger's service area has a present population of 35,900. The treatment plant has an average dry weather flow design of 5.5 million gallons per day (mgd). The plant presently discharges an average dry weather flow of 3.5 mgd, and an annual average effluent flow of 3.85 mgd.
5. The treatment facility consists of screening, grit removal, primary clarification, activated sludge, secondary clarification, and disinfection. Sludge is thickened, anaerobically digested, dewatered by belt press, and disposed of by land application. The treated wastewater is discharged into the combined NBSU forcemain-outfall with final disposal into the deep water channel of San Francisco Bay, a water of the State and the United

States, northeast of Point San Bruno. The discharge is through a submerged diffuser about 5,300 feet offshore at a depth of 20 feet below mean lower low water (Latitude 37 deg., 39 min., 55 sec.; Longitude 122 deg., 21 min., 41 sec.).

Bypassing of secondary effluent to the emergency nearshore outfall (Latitude 37 deg., 35 min., 32 sec.; Longitude 122 deg., 21 min., 15 sec.) may occur during wet weather due to inadequate hydraulic and treatment capacity at the plant. Any such overflow or bypass is a violation of the requirements of this Order.

6. The Board adopted a revised Water Quality Control Plan for the San Francisco Basin (Basin Plan) on December 17, 1986. The Basin Plan identifies beneficial uses and water quality objectives for surface and groundwaters in the region, as well as effluent limitations and discharge prohibitions intended to protect beneficial uses.
7. The beneficial uses of San Francisco Bay are:
  - Industrial service supply
  - Navigation
  - Water contact recreation
  - Non-contact water recreation
  - Commercial and sport fishing
  - Wildlife habitat
  - Preservation of rare and endangered species
  - Fish spawning and migration
  - Shellfish harvesting
  - Estuarine habitat
8. Effluent limitations in this permit are based on the plans, policies, and water quality objectives and criteria of the Basin Plan, *Quality Criteria for Water* (EPA 440/5-86-001, 1986; Gold Book), applicable Federal Regulations (40 CFR Parts 122 and 131), the National Toxics Rule (57 FR 60848, 22 December 1992; NTR), and Best Professional Judgement.
9. The effluent concentration limit for copper included in this permit is based on 4.9  $\mu\text{g/l}$  copper as an interpretation of the narrative toxicity objective in the Basin Plan, based on best professional judgement. From a technical standpoint, 4.9  $\mu\text{g/l}$  copper is currently the best available criterion that is protective of the most sensitive designated use of San Francisco Bay waters with respect to copper: habitat for aquatic organisms. The criterion is based on the Regional Board study to develop a site-specific objective for copper, which employed the "water effect ratio" approach developed by the EPA. This approach provides a measure of the binding capacity of natural waters (dependent on particulate matter) relative to the binding capacity of reference waters (filtered oceanic water). This study and associated staff analysis are described in a September 25, 1992 Regional Board staff report entitled "Revised Report on Proposed Amendment to Establish a Site Specific Objective for Copper for San Francisco Bay".

10. During wet weather, the discharger's collection system experiences infiltration and inflow which results in bypassing raw sewage to city streets and storm drains. According to recent bypass reports there are at least 3 known overflow locations. The overflows discharge raw sewage into the Bay shoreline. Significant shellfish beds exist along much of the shoreline near Burlingame. Water-contact recreation also takes place along the shoreline. Provision E.8. of this order establishes a time schedule for the tasks to be performed by the discharger in order to eliminate the overflows.
11. In the early 1980's, the Board's Shellfish Program identified major shellfish beds existing along the San Mateo-Foster City shoreline. The NBSU joint outfall is located about six and one-half miles north of those beds. During the summers of 1982, 1983, and 1985, some of these beds were opened for direct recreational harvesting.

Members of NBSU qualify for a less stringent coliform requirement of 240 MPN/100 ml (five sample moving median) and 2,400 MPN/100 ml (daily maximum). This determination is based on (1) recent studies by the Board that justify a less stringent coliform requirement (23 MPN/100 ml median, 240 MPN/100 ml max.) within 1,000 yards of the shellfish beds, and the fact that NBSU outfall is located over six miles from the beds, (2) the fact that less stringent coliform requirements require reduced chemical uses, and (3) the fact that reduced use of chlorine for disinfection results in reduced levels of chlorinated by-products in the discharge.

12. The discharger is hereby notified that on February 19, 1993, the U.S. Environmental Protection Agency (USEPA) issued the final rule for the use and disposal of sewage sludge (40 [Code of Federal Regulations] (CFR) Part 503). This rule requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. The discharger is advised to contact USEPA regarding compliance with 40 CFR Part 503.
13. Federal Regulations for stormwater discharges were promulgated by the U.S. Environmental Protection Agency on November 19, 1990. The regulations [40 Code of Federal Regulations (CFR) Parts 122, 123, and 124] require specific categories of industrial activity (industrial storm water) to obtain a NPDES permit and to implement Best Available Technology Economically Available (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial stormwater discharges.

The discharger's report of waste discharge for issuance of General NPDES Permit for stormwater discharges included submittal of a Storm Water Pollution Prevention Plan which describes industrial storm water discharges at the facility and describes storm water management controls. The storm water flows from the wastewater treatment facility process areas are directed to the San Francisco Bay. These storm water flows constitute all industrial storm water at this facility and consequently General NPDES permit regulates all industrial storm water discharge at this facility.

14. An **Operations and Maintenance Manual** is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, recommended operation strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, the manual shall be kept updated to reflect significant changes in treatment facility equipment and operation practices.
15. The discharger has implemented and is maintaining an USEPA approved pretreatment program in accordance with Federal pretreatment regulations (40 CFR 403) and this Board's Order No. 89-179.
16. This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21000) of Division 13 of the Public Resources Code [California Environmental Quality Act (CEQA)] pursuant to Section 13389 of the California Water Code.
17. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided an opportunity to submit their written views and recommendations.
18. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED**, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

**A. Discharge Prohibitions**

1. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited except as provided in Prohibition 3.
2. Bypass or overflow of untreated wastewater to waters of the State either at the treatment plant or from any of the discharger's interceptor system and pump stations tributary to the treatment plant is prohibited.
3. Discharge to the emergency outfall is prohibited except during extreme wet weather events when the maximum hydraulic capacity of the Burlingame to Millbrae section of the NBSU forcemain is exceeded or when maintenance or repairs to the NBSU forcemain are required.
4. The average dry weather flow shall not exceed 5.5 mgd. This average shall be determined over three consecutive dry weather months each year.

## B. Effluent Limitations

1. Effluent discharged into the combined forcemain-outfall shall not exceed the following limits:

<u>Constituents</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Maximum Daily</u>	<u>Instantaneous Maximum</u>
a. Settleable Matter	ml/l-hr	0.1	--	--	0.2
b. BOD (5-day)	mg/l	30	45	60	--
c. Total Suspended Solids	mg/l	30	45	60	--
d. Total Chlorine Residual <sup>(1)</sup>	mg/l	--	--	--	0.00

- <sup>(1)</sup> Requirement defined as below the limit of detection in the latest edition of "Standard Methods for the Examination of Water and Wastewater." Compliance with this limitation will normally be demonstrated at the NBSU joint dechlorination facility.

2. **pH:** the pH of the discharge shall not exceed 9.0 nor be less than 6.0

3. **Total Coliform Bacteria:**

The moving median value for the Most Probable Number (MPN) of total coliform bacteria in any five (5) consecutive samples shall not exceed 240 MPN/100 ml (240 MPN/100 ml). Any single sample shall not exceed 2,400 MPN/100 ml.

4. **85 Percent Removal, BOD and TSS:**

The arithmetic mean of the biochemical oxygen demand (Five-day, 20°C) and total suspended solids values, by weight, for effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period.

5. **Acute Toxicity:** Representative samples of the effluent shall meet the following limits for acute toxicity: (Provision D.6. of this Order applies to these bioassays.)

The survival of organisms in undiluted effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival. The eleven sample median and 90th percentile effluent limitations are defined as follows:

**11 sample median:** A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.

**90th percentile:** A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay tests show less than 70 percent survival.

6. **TOXIC SUBSTANCES EFFLUENT LIMITATIONS:** The discharge of effluent containing constituents in excess of the following concentration limits is prohibited<sup>(a,f)</sup>:

**Table 1**  
(All limits in  $\mu\text{g}/\ell$ )

<u>Constituent</u>	<u>Monthly Average<sup>(b)</sup></u>	<u>Daily Average<sup>(b)</sup></u>
1. Arsenic <sup>(h)</sup>	---	200
2. Cadmium <sup>(h)</sup>	---	30
3. Chromium (VI) <sup>(c) (h)</sup>	---	110
4. Copper	---	37
5. Lead <sup>(g)</sup>	---	53
6. Mercury	0.21	1
7. Nickel <sup>(g)</sup>	---	65
8. Selenium <sup>(g)</sup>	---	50
9. Silver <sup>(h)</sup>	---	23
10. Zinc <sup>(g) (h)</sup>	---	580
11. Cyanide <sup>(e)</sup>	---	10
12. PAHs <sup>(d)</sup>	0.31	150
13. Phenols		500

Footnotes:

- a. These limits are based on marine water quality objectives, and are intended to be achieved through secondary treatment and, as necessary, pretreatment and source control.
- b. Limits apply to the average concentration of all samples collected during the averaging period (Daily - 24-hour period; Monthly - Calendar month).
- c. The discharger may meet this limit as total chromium.
- d. PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[a,h]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene.
- e. The discharger may demonstrate compliance with this limitation by measurement of weak acid dissociable cyanide.
- f. All analyses shall be performed using current USEPA Methods, as specified in 40 CFR 136 (40 CFR 122.44(i)).
- g. Effluent limitation may be met as a 4-day average. If compliance is to be determined based on a 4-day average, then concentrations of four 24-hour composite

samples shall be reported, as well as the average of four.

- h. Limit was specified in the previous permit and is lower than new limit specified in the revised Basin Plan. The discharger has maintained compliance with this lower limit; therefore, this limit will continue to apply to the effluent, and not be replaced with the new limit from the Basin Plan.

### C. Receiving Water Limitations

- 1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

- a. Floating, suspended, or deposited macroscopic particulate matter or foam;
- b. Bottom deposits or aquatic growths;
- c. Alternation of temperature, turbidity, or apparent color beyond present natural background levels;
- d. Visible, floating, suspended, or deposited oil or other products of petroleum or origin;
- e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or water fowl, or which render any of these unfit for human consumption wither at levels created in the receiving waters or as result of biological concentration.

- 2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

- a. Dissolved Oxygen                      5.0 mg/l minimum.

Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentrations than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

- b. Dissolved Sulfide                      0.1 mg/l maximum.

- c. pH                                          Variation from natural ambient pH by more than 0.5 pH units.

- d. Un-ionized Ammonia                      0.025 mg/l as N Annual Median  
0.16 mg/l as N Maximum

- 3. The discharge shall not cause a violation of any applicable water quality (objective standard for receiving water adopted by the Board or the State Water Resource Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or

approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

#### **D. Provisions**

1. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 90-100. Order No. 90-100 is hereby rescinded.
2. The two dischargers named in this Order shall be responsible for compliance with the requirements and provisions for discharges over which they control. The City of Burlingame shall comply with requirements relating to the discharge from its Waste Water Treatment Plant, and NBSU shall comply with requirements relating to the discharge of the combined effluents.
3. Where concentration limitations in mg/l or  $\mu\text{g/l}$  are contained in this Permit, the following Mass Emission Limitations shall also apply:

(Mass Emission Limit in kg/day) = (Concentration Limit in mg/l) x (Actual Flow in million gallons per day averaged over the time interval to which the limit applies) x 3.785 (conversion factor).

4. As new water quality objectives go into effect for San Francisco Bay (whether statewide, regional or site-specific), the effluent limitations in this permit will be modified as necessary to reflect the objectives. Adoption of the effluent limitations contained in this permit is not intended to restrict in any way future modification based on legally adopted water quality objectives.

#### **5. Compliance with Acute Toxicity Effluent Limitation**

- a. Compliance with Effluent Limitation B.5 (Acute Toxicity) of this Order shall be evaluated by measuring survival of test fishes exposed to undiluted effluent for 96 hours in flow-through bioassays. Each fish species represents a single bioassay.
- b. The two compliance species shall be specified by the Executive Officer. The discharger shall conduct a minimum of one screening of three species: three-spine stickleback, rainbow trout and fathead minnow. The three species screening requirement can be met using either flow-through or static renewal bioassays. The discharger shall submit screening test data acceptable to the Executive Officer, within 3 months after adoption of this Order.
- c. The Executive Officer may consider allowing compliance monitoring with only one fish species (the most of the two), if the discharger can document that the acute toxicity limitation, specified above, has not been exceeded during the



previous three years, or that acute toxicity has been observed in only one of two fish species.

- d. All bioassays shall be performed according to protocols approved by the USEPA or State Board, or published by the American Society for Testing and Materials (ASTM) or American Public Health Association.

## 6. Toxic Pollutants Special Study

The dischargers shall submit a technical report acceptable to the Executive Officer summarizing the results of a minimum of six (6) effluent sample analysis for the constituents listed in Table 2 of the attached Self-Monitoring Program (three in wet season and three in dry season), with the exception of TCDD Equivalents [dioxins] for which three (3) analyses shall be sufficient. For each constituent, the report shall include the limit of quantification (LOQ), method detection limit (MDL), and practical quantification limit (PQL) achieved at the discharger's laboratory. For constituents analyzed by outside laboratories, MDLs and PQLs should be provided to the discharger by outside laboratories, and included in this technical report. The technical report shall contain recommendations on effluent sampling and analysis, both with respect to type and frequency of analysis. This NPDES permit shall be subsequently modified to include effluent sampling for the subject constituents.

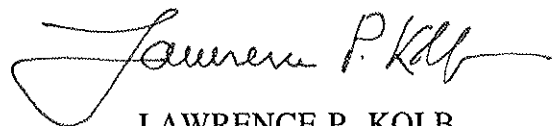
7. The discharger shall perform collection system improvements to prevent spills and overflows from its sewer collection system in accordance with the following time schedule:

<u>Task</u>	<u>Completion Date</u>	<u>Report of Compliance</u>
a. Complete construction of 18" relief sewer line in El Camino Real between Hill Side Drive and Easton Drive	December 1, 1995	December 15, 1995
b. Submit a proposal to construct an interceptor sewer from the main pump station along Rollins Road, Cadillac Way, under the railroad tracks to California Drive then along California Drive to Rosedale Avenue.	January 1, 1996	January 15, 1996
c. Complete construction of an interceptor sewer line as described in Task b above.	June 1, 1999	June 15, 1999

8. If the discharger chooses to pursue a capacity increase for the treatment plant, information that must be submitted prior to Board consideration of a flow increase must include, but may not be limited to, the following:
  - a. Engineering reports documenting adequate reliability, capacity and performance of the completed improvements to the treatment facility;
  - b. Documentation that increased discharges (evaluation must include assessment of wet weather flows) will not result in degradation of receiving waters, or adverse impacts on beneficial uses of receiving waters, in accordance with State and Federal regulations;
  - c. Plans for including reuse of the treated effluent as an integral part of the wastewater management plan; and
  - d. Documentation of compliance with the CEQA.
9. The discharger shall implement and enforce its approved pretreatment program in accordance with Board Order 89-179 and its amendments thereafter. The discharger's responsibilities include, but are not limited to:
  - a. Enforcement of National Pretreatment Standards (e.g. prohibited discharges, Categorical Standards, local limits) in accordance with 40 CFR 403.5 and Section 307(b) and (c) of the Clean Water Act.
  - b. Implementation of the pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the General Pretreatment regulations (40 CFR 403) and its approved pretreatment program.
  - c. Submission of annual and semiannual reports to USEPA and the State as described in Board Order 89-179, and its amendments thereafter.
10. The discharger shall review, and update as necessary, its Operations and Maintenance Manual, annually, or within 90 days of completion of any significant facility or process changes. The discharger shall submit to the Board, by April 15 of each year, a letter describing the results of the review process including an estimated time schedule for completion of any revisions determined necessary, and a description or copy of any completed revisions.
11. Annually, the discharger shall review and update as necessary, its Contingency Plan as required by Board Resolution 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or adequately implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code. Plan revisions, or a letter stating that no changes are needed, shall be submitted to the Board by **April 15** of each year.
12. The discharger shall comply with all sections of this Order immediately upon adoption.

13. The discharger shall comply with the **Self-Monitoring Program** for this order, as adopted by the Board and as may be amended by the Executive Officer.
14. The discharger shall comply with all applicable items of the attached "**Standard Provisions and Reporting Requirements** " dated August 1993, or any amendments thereafter.
15. The Board may modify, or revoke and reissue, this Order and Permit if present or future investigations demonstrate that the discharge(s) governed by this Order are causing or significantly contributing to adverse impacts on water quality and/or beneficial uses of the receiving waters.
16. This Order expires on October 18, 2000. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days before this expiration date as application for reissuance of waste discharge requirements.
17. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, EPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

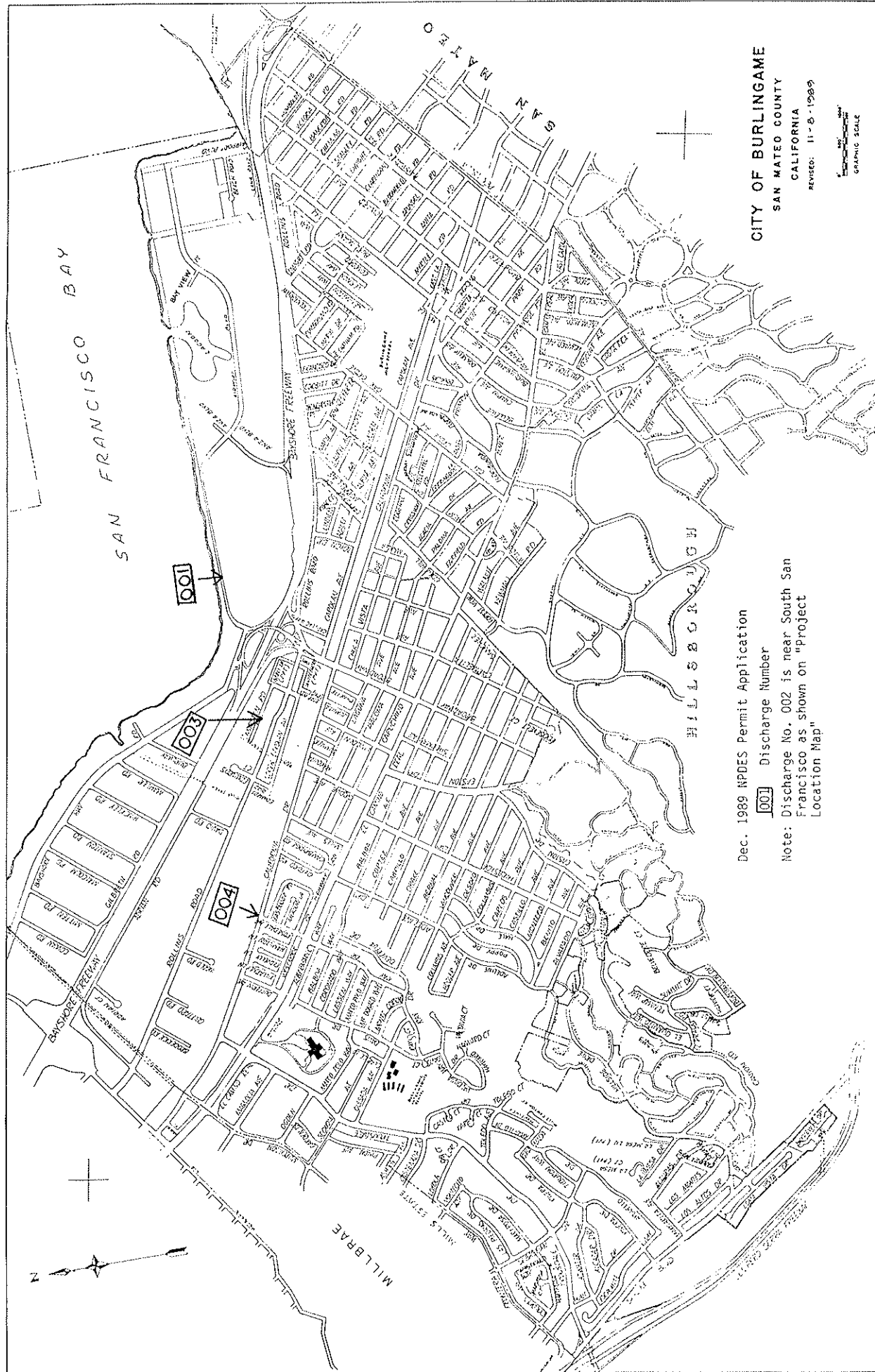
I, Lawrence P. Kolb, Acting Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 18, 1995.



LAWRENCE P. KOLB  
Acting Executive Officer

Attachments:

- A. Map of Wastewater Facility and Effluent Discharge Locations
- B. Definition of Terms for Chemical Constituents
- C. Self-Monitoring Program
- D. Standard Provisions and Reporting Requirements - August 1993
- E. Resolution No. 74-10



CITY OF BURLINGAME  
 SAN MATEO COUNTY  
 CALIFORNIA  
 REVISION: 11-8-1989

Dec. 1989 NPDES Permit Application

001 Discharge Number

Note: Discharge No. 002 is near South San Francisco as shown on "Project Location Map"

## ATTACHMENT B

### DEFINITION OF TERMS FOR CHEMICAL CONSTITUENTS

CHLORDANE shall mean the sum of chlordan- $\alpha$ , chlordan- $\gamma$ , chlordan- $\alpha$ , chlordan- $\gamma$ , nonachlor- $\alpha$ , nonachlor- $\gamma$ , and oxychlordan.

CHROMIUM VI limit may be met by analysis for total or hexavalent chromium.

DDT shall mean the sum of the p,p' and o,p' isomers of DDT, DDD (TDE), and DDE.

ENDOSULFAN shall mean the sum of endosulfan- $\alpha$ , endosulfan- $\beta$ , and endosulfan sulfate.

ENDRIN shall mean the sum of endrin and endrin aldehyde.

HALOMETHANES shall mean the sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[a,h]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene.

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

TCDD EQUIVALENTS shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity equivalence factors, as shown in the table below.

<u>Isomer Group</u>	<u>Toxicity Equi- valence Factor</u>
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDD	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8-tetra CDF	0.1
1,2,3,7,8-penta CDF	0.05
2,3,4,7,8-penta CDF	0.5
2,3,7,8-hexa CDFs	0.1
2,3,7,8-hepta CDFs	0.01
octa CDFs	0.001

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM  
FOR  
CITY OF BURLINGAME  
AND  
NORTH BAYSIDE SYSTEM UNIT  
SAN MATEO COUNTY

NPDES NO. CAO037788

ORDER NO. 95-208

CONSISTING OF  
PART A, DATED AUGUST 1993  
AND PART B

## PART B

### I. DESCRIPTION OF SAMPLING STATIONS

#### A. INFLUENT AND INTAKE

<u>Station</u>	<u>Description</u>
A-001	Any point in the treatment facilities headworks at which all waste tributary to the system is present, preceding any phase of treatment, and exclusive of any return flows or process sidestreams.

#### B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point after disinfection between the point of discharge into the combined forcemain-outfall and the point at which all waste from the treatment plant is present.
E-002	At any point in the combined outfall after dechlorination between the point of discharge into San Francisco Bay and the point at which all waste tributary to that combined outfall is present.

#### C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	At a point in San Francisco Bay located over the geometric center of the outfall's discharge points.
C-2	At a point in San Francisco Bay located midway between C-1 and C-3.
C-3	At a point in San Francisco Bay located in the center of the waste plume.
C-50-SW	At a point in San Francisco Bay, located 50 feet southwesterly, along the outfall line shoreward from Station C-1.

C-50-NW	At a point in San Francisco Bay, located 50 feet northwesterly from Station C-1, normal to the outfall line.
C-50-NE	At a point in San Francisco Bay, located 50 feet northeasterly from Station C-1, along the outfall line extended.
C-50-SE	At a point in San Francisco Bay, located 50 feet southeasterly from Station C-1, normal to the outfall line.
C-300-N through C-300-NW (8 stations)	At a point in San Francisco Bay located on a 300 foot radius from the geometric center of the outfall diffuser, at equidistant intervals, with Station C-300-SW located shoreward from Station C-1 at the outfall line.
C-R-NW	At a point in San Francisco Bay located approximately 1500 feet northerly from the point of discharge.
C-R-SE	At a point in San Francisco Bay located approximately 1500 feet southeasterly from the point of discharge.

#### D. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
P-1 through P-'n'	Located along the periphery of the waste treatment or disposal facilities, at equidistant intervals, not to exceed 500 feet. (A sketch showing the locations of these stations will accompany each report.)

#### E. OVERFLOWS AND BYPASSES

<u>Station</u>	<u>Description</u>
OV-1 through OV-'n'	Bypass or overflows from manholes, pump stations, or collection systems.

REPORTING - shall be submitted monthly and include date, time, quantity, and period of each overflow or bypass and measures taken or planned to prevent future occurrences (See Part A, Section F.2.)



## II. SCHEDULE OF SAMPLING, ANALYSIS AND OBSERVATIONS

The schedule of sampling, analysis and observation shall be that given in Table 1.

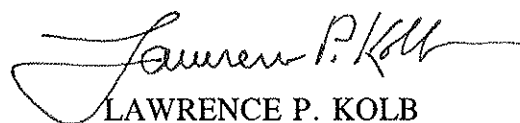
## III. REPORTING REQUIREMENTS

1. General Reporting Requirements are described in Section C of this Board's "Standard Provisions and Reporting Requirements", dated August 1993.
2. Self-Monitoring Reports for each calendar month shall be submitted monthly, by the 22<sup>nd</sup> day of the following month. The required contents of these reports are described in Section F.4. of Part A.
3. An Annual Report for each calendar year shall be submitted to the Board by February 15th of the following year. The required contents of the annual report are described in Section G.5. of Part A.
4. Any overflow, bypass or significant non-compliance incident that may endanger health or the environment shall be reported according to the Sections F.1 and F.2 of Part A.

I, Lawrence P. Kolb, Acting Executive Officer, hereby certify that this Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 95-208.
2. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be authorized by the Executive Officer.
3. Is effective on the date shown below.

Effective Date: October 18, 1995

  
LAWRENCE P. KOLB  
Acting Executive Officer

Attachment:

Table 1 and Footnotes  
Part A, August 1993

**TABLE 1** <sup>(1,7,13)</sup>  
**SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS**  
**CITY OF BURLINGAME**  
**ORDER NO. 95-208**

SAMPLING STATION	A-1	E-001			E-002			All C Sta.	All P Sta.
TYPE OF SAMPLE	C-24	G <sup>4</sup>	C-24	Cont.	G <sup>4</sup>	C-24 <sup>10</sup>	Cont.	G <sup>4,11</sup>	O
Flow Rate (mgd)				D			D		
BOD, 5-day, 20 <sup>0</sup> C <sup>(3)</sup> (mg/l & Kg/day)	2/W		3/W			5/W			
Chlorine Residual & Dosage (mg/l & Kg/day) <sup>(12)</sup>		2H or continuous			2H or continuous				
Settleable Matter <sup>(3)</sup> (ml/l-hr. & Cu. ft./day)		D			D				
Total Suspended Matter (mg/l & Kg/day)	2/W		D		5/W				
Total Coliform (MPN/100 ml)		3/W			5/W			M <sup>14</sup>	
Acute Fish Toxicity, 96-hr. (% survival) <sup>(5, 6)</sup>				M			M <sup>10</sup>		
Oil & Grease (mg/l & Kg/day)	2/M <sup>2</sup>	2/M <sup>2</sup>			2/M <sup>2</sup>				
Ammonia Nitrogen (mg/l & Kg/day)			M <sup>9</sup>			M <sup>8</sup>			
Nitrate Nitrogen (mg/l & Kg/day)			M <sup>9</sup>			M <sup>8</sup>			
Nitrite Nitrogen (mg/l & Kg/day)			M <sup>9</sup>			M <sup>8</sup>			
Un-ionized Ammonia (mg/l)			M <sup>9</sup>			M <sup>8</sup>			
Turbidity (NTU)			D			M		M	
pH (Units)		D			D			M	
Dissolved Oxygen (mg/l & % Saturation)		D			D			M	
Temperature (°C)		D			D			M	

**TABLE 1 (continued)<sup>(1,7,13)</sup>**  
**CITY OF BURLINGAME**

SAMPLING STATION	A-1	E-001			E-002			All C Sta.	All P Sta.
TYPE OF SAMPLE	C-24	G <sup>4</sup>	C-24	Cont.	G <sup>4</sup>	C-24 <sup>10</sup>	Cont.	G <sup>4,11</sup>	O
Secchi Disc (inches)								M	
Sulfides (If DO < 5.0 mg/l) Total & Dissolved (mg/l)		D			D			D	
Arsenic (µg/l & Kg/day)			M						
Cadmium (µg/l & Kg/day)			M						
Chromium (µg/l & Kg/day)			M						
Copper (µg/l & Kg/day)			M						
Cyanide (µg/l & Kg/day)			M <sup>15</sup>						
Lead (µg/l & Kg/day)			M						
Mercury (µg/l & Kg/day)			M						
Nickel (µg/l & Kg/day)			M						
Selenium (µg/l & Kg/day)			M						
Silver (µg/l & Kg/day)			M						
Zinc (µg/l & Kg/day)			M						
PAHs (µg/l & Kg/day)			M						
Phenolic Compounds (µg/l & Kg/day)			M <sup>15</sup>						
All applicable Standard Observations		D			D			M	E
Constituents in Table 2 <sup>(15)</sup> (µg/l & Kg/day)			(16)						

## LEGEND

### TYPES OF SAMPLES

G = grab sample  
C-24 = composite sample (24-hour)  
Cont. = continuous sampling  
O = observation

### TYPES OF STATIONS

E = waste effluent stations  
C = receiving water stations  
L = basin and/or pond levee stations  
P = treatment facilities perimeter stations

### FREQUENCY OF SAMPLING

E = each occurrence	2/H = twice per hour	2H = every 2 hours
H = once each hour	2/W = 2 days per week	2D = every two days
D = once each day	5/W = 5 days per week	2W = every two weeks
W = once each week	2/M = 2 days per month	2M = every two months
M = once each month	2/Y = twice per year	Cont. = continuous
Y = once each year	Q = quarterly, once each in Mar., June, Sept., & Dec.	

## NOTES FOR TABLE 1:

- (1) During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement and analysis:
  - a. Composite sample for BOD and Total Suspended Solids.
  - b. Grab samples for Total Coliform, Settleable Matter, and Oil and Grease.
  - c. Continuous monitoring of flow.
  - d. Continuous or every two hour monitoring of chlorine residual.
- (2) Oil and Grease sampling shall consist of 3 grab samples taken at 8-hour intervals during the sampling day with each grab collected in a glass container and analyzed separately. Results for Stations A-001 and E-001 shall be expressed as a weighted average of 3 values, based upon the instantaneous flow rates occurring at the time of each grab sample. Results for Station E-002 shall be expressed as a simple average of the three values. If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the grab samples may be taken at approximately equal intervals during the period that the plant is staffed or during the period that the plant is discharging.
- (3) Percent removal (effluent vs. influent) shall also be reported.
- (4) Grab samples shall be taken on day(s) of composite sampling.
- (5) Compliance with the acute toxicity limitations shall be determined using two test species in parallel flow-through bioassays. One shall be three-spine stickleback, and the other shall be either rainbow trout or fathead minnow. The sample may be taken from E-001 prior to disinfection instead of continuously dechlorinating E-001 effluent. Compliance with the toxicity limitation may be demonstrated after adjusting the effluent pH through the addition of concentrated sulfuric acid to minimize the concentration of un-ionized ammonia. All tests shall be conducted in accordance with EPA protocols.
- (6) Sample date for bioassay and one for all other specified parameters shall coincide with composite sample(s).
- (7) If any effluent sample is in violation of limits, except those for metals, cyanide, and organics, sampling shall be increased for that parameter to at least daily or greater until compliance is demonstrated in two successive samples. Receiving water violations shall be reported in the monthly report; increased receiving water monitoring may be required. Compliance measurements represent compliance status for the time period between measurements.
- (8) These parameters shall be tested for on the same composite sample used for the bioassay.

- (9) These parameters shall be tested for in the effluent when the flow-through bioassay test is in progress.
- (10) Sample date for bioassay and for one of all other specified parameters at E-002 shall coincide with date and times of Marine Magnesium Company's E-001 composite sample.
- (11) Sampling shall be coordinated to be on the same date and approximate time as for the City of San Mateo and the South Bayside System Authority.
- (12) Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.
- (13) All flow other than to the outflow (e.g. sludge, etc.) shall also be reported monthly. Daily records shall be kept of the quantity (cu. yds. or cu. ft.) and solids content (%) of dewatered sludge disposed of and the location of disposal.
- (14) 5 samples per station at Stations C-1, 2, 3, CR-NW, and CR-SE only.
- (15) A minimum of four grab samples, one every six hours over a 24-hour period, must be used for volatile organic compounds (EPA Method 624), Cyanide and Phenolic Compounds. These samples shall be composited at the laboratory just prior to analysis.
- (16) For sampling frequency, refer to Provision D.7. of the NPDES permit. Constituents to be monitored are listed in the following table:

**TABLE 2**

**TOXIC ORGANIC POLLUTANT MONITORING LIST FOR  
CITY OF BURLINGAME WASTEWATER TREATMENT PLANT**

**Constituent**

1,2 Dichlorobenzene  
1,3 Dichlorobenzene  
1,4 Dichlorobenzene  
2,4,6 Trichlorophenol  
Aldrin  
 $\alpha$ -BHC  
Benzene  
 $\beta$ -BHC  
Chlordane  
Chloroform  
DDT

**TABLE 2 (continued)**

**TOXIC ORGANIC POLLUTANT MONITORING LIST FOR  
CITY OF BURLINGAME WASTEWATER TREATMENT PLANT**

**Constituent**

Dichloromethane  
Dieldrin  
Endosulfan  
Endrin  
Fluoranthene  
 $\gamma$ -BHC (Lindane)  
Halomethanes  
Heptachlor  
Heptachlor Epoxide  
Hexachlorobenzene  
PCBs (Total)  
Pentachlorophenol  
TCDD Equivalents [dioxin]  
Toluene  
Toxaphene  
Tributyltin